REMARKS

In response to the Office Action dated December 30, 2008, Applicants respectfully submit the Remarks, and reconsideration is respectfully requested. Claims 1-14 have been canceled, and claims 15-25 have been added. Hence claims 15-25 are currently pending in this application.

New Claims 15-25

Applicants respectfully submit that claims 15-25 have been amended to clarify the claimed subject matter of the present invention. Minor grammatical changes have also been made to these claims to conform to U.S. practice. Support for these amended claims can be found throughout the specification, particularly in the original claims, in the examples, and at page 2, line 23 to page 3, line 14 of the specification.

Specifically, claims 15 and 16 have been added to replace the subject matter recited in canceled claims 1-4. Claim 17 has been added to replace the subject matter recited in canceled claim 5. Claim 18 has been added to replace the subject matter recited in canceled claim 6. Claims 19 -24 have been added to replace the subject matter recited in canceled claims 7-12. Claim 25 has been added to replace the subject matter recited in canceled claims 13 and 14.

No new matter has been added. Hence, Applicants respectfully request consideration and entry of these claims.

Rejection under 35 USC § 112, 2nd paragraph

Claims 1-14 have been rejected under 35 USC § 112, 2nd paragraph for being indefinite.

Applicants respectfully submit that claims 1-14 have been canceled, and thus this rejection has been obviated.

Applicants further respectfully submit that new claims 14-25 claims have been added to clearly define the subject matter which Applicants regard as the invention.

In view of the above, Applicants respectfully request reconsideration and withdrawal of this rejection.

Rejection under 35 USC § 102

Claims 1-9 and 12-14 have been rejected under 35 USC § 102 (b) for being anticipated by Dorval et al. (US Patent No. 5,561,045). The examiner alleges that Dorval et al. teach a solid support with a first antigen containing protein A, a second microbial antigen, the addition of the detection agent which is labeled anti-human immunoglobulin which does not react with protein A (see figures 1A-1F).Applicants respectfully traverse.

Applicants respectfully submit that claims 1-14 have been canceled, and thus this rejection has been obviated.

Applicants respectfully submit that Dorval et al. is directed to a method and kit that is different from the claimed invention.

Applicants respectfully submit that the claimed invention is directed to a method and kit for detecting the presence of antibodies specific to an infectious microbial agent in a sample to be tested. The method of the claimed invention comprises: a) depositing on a solid substrate a first antigen Ag_1 comprising a whole Staphylococcus aureus bacterium which comprises protein A and at least one second antigen Ag_2, wherein said second antigen Ag_2 is an infectious microbial agent, and b) contacting said first antigen Ag_1 and said at least one second antigen Ag_2 with a sample to be tested causing said first antigen Ag_1 and said at least one second Ag_2 to react with a sample to be tested, and c) detecting whether a human

immunoglobulin Ac_1 in said human serum reacts with said first antigen Ag_1 by causing the reaction product Ag_1-Ac_1 to react with a detection substance, wherein said detection substance reacts with said human immunoglobulin and not with said first antigen (Ag_1), and wherein the reaction product Ag_1-Ac_1 is formed from the reaction of said human immunoglobulin Ac_1 and said first antigen Ag_1, and d) providing a controlled sample containing a human serum to be tested for detecting whether said human immunoglobulin react with said first antigen.

Applicants respectfully submit that the Dorval et al. document neither teaches nor suggests the claimed invention as recited in new claims 15-25. Specifically, Dorval et al. do not teach nor suggest the addition of the detection agent which is a labeled anti-human immunoglobulin that does not react with protein A as recited in claims 15-25.

In addition, Applicants respectfully submit that the Dorval et al. document neither teaches nor suggests that the protein A can be used as a control antigen for determining whether or not a negative serum sample is due to the absence of reaction with a serum, let alone that is controlled and that the sample to be tested contains a human serum.

Applicants respectfully submit that, the Dorval et al. document is directed to a method for simultaneously detecting immunoglobulins including IgG, IgA and/or IgM in a single test assay so that if any of these immunoglobulins have been produced in response to a particular infection agent, such production could be detected which is different from the claimed invention.

Applicants respectfully submit that the Dorval et al. document is directed to a labeled protein A which is used to determine the presence of IgG while labeled anti-

IgA-IgG or labeled anti-IgM-IgG are used to determine the presence of IgA or, respectively, IgM. However, when such agents are used together, the labeled protein A is bound to the labeled anti-IgA-IgG and anti-IgM-IgG which is also different from the claimed invention (see column 5, lines 50-62).

Specifically, as recited in column 10, lines 24, 25, 26 of the Dorval et al. document, the invention of Dorval et al. "is useful whenever it is desirable to prevent the interaction of two detection reagents with one another." The Dorval et al. document is silent on the use of the protein A as a control antigen for determining whether or not a negative serum sample is due to the absence of reaction with a serum as recited in the claims of the present invention.

Applicants respectfully submit that Dorval et al. disclose a blocking agent is used to prevent interaction between the two detection reagents, namely protein A and anti-IgA-IgG or anti-IgM-IgG. As stated column 10, lines 2-3 of the Dorval et al. document : "preferably, these labeled immunoglobulins are blocked with the label itself and the detection reagent includes labeled protein A, labeled and blocked anti-IgA-IgG and labeled and blocked anti-IgM-IgG which is different from the claimed invention.

Applicants further respectfully submit that according to the assay of Dorval et al., the detection reagent includes protein A 36 coupled to a hydrophobic label, specifically indigo, which binds to IgG bound to protein A at area 12 of surface 10 and to IgG bound to HIVE at area 16 of surface 10. The reagent also includes anti-IgA-IgG 38 which binds to IgA bound to IgV at area 16 of surface 10 and anti-IgM-IgG 40 which binds to IgM bound to HIV at area 16 of surface 100. More specifically, as specified in column 11, lines 24-27 of the Dorval et al. document, indigo (the

label) is coupled to each of anti-IgA-IgG 38 and anti-IgM-IgG 40, serving both as a label and a blocking agent blocking the biding site on each from interaction with protein A.

In contrast, the present invention is directed to the detection substance that does not comprise a labeled protein A but an anti human immunoglobulin that does not react with protein A.

Applicants respectfully submit that Dorval et al. disclose the presence of label at first immobilized assay reagent area 12 only (with no label at area 16) indicates the absence of antibodies to HIV.

Applicants respectfully submit that in contrast to the teaching of Dorval et al. there is no use of a labeled protein A in the claimed invention. The present invention is directed to the use of protein A as a control antigen which is neither taught nor suggest by Dorval et al.

Applicants respectfully submit that column 6, lines 49-50 of the Dorval et al. document recites "a label itself defines a water-insoluble particulate species that serves as a blocking agent" and, in column 7, lines 60-66, Dorval et al. recites that: "when a dispersion of water-insoluble particulate label is formed.....the immunoglobulins became hydrophobically coupled to the particulate label.....and are blocked with respect to biological binding with proteins that bind the Fc region of the immunoglobulin" such as protein A. "The specific binding capability of the immunoglobulin, however, remains intact". This teaching is different from the claimed invention.

In addition, Dorval et al. disclose the use of indigo as a dye or pigment corresponding to the water-insoluble particulate label serving as blocking agent.

Column 11, lines 24-27 of the Dorval et al. document recites that indigo serves both as a label and a blocking agent blocking the binding site on each anti-Iga-IgG and anti-IgM-IgG from interaction with protein A.

Applicants also respectfully submit that Dorval et al. do not each using immobilized protein A on a solid substrate and contacting the substrate with a sample to be tested and reacting the solid substrate with an anti human immunoglobulin not reacting with protein A.

In addition, Dorval et al. do not teach or suggest a method or kit for detecting whether the tested sample contains a human serum by detecting whether said detection substance consisting in an anti human immunoglobulin react or not with a human immunoglobulin-first antigen reaction product as reacted with the said detection substance as claimed in the present invention.

In view of the above, Applicants respectfully request reconsideration and withdrawal of this rejection.

Rejection under 35 USC § 103

Claims 10 and 11 have been rejected under 35 USC § 103 (a) for being unpatentable over Dorval et al. (US Patent No. 5,561,045) in view of La Scola et al. (Journal of Clinical Microbology, 1996; 34(9): 2270-2274). Although the examiner acknowledges that Dorval et al. do not teach a second antigen being Bartonella or a bacterium being responsible for endocarditis, the Examiner alleges that La Scola et al. teaches this. Thus, the Examiner alleges that the combined teaching of these two documents suggests the claimed invention. Applicants respectfully traverse.

Applicants respectfully submit that claims 10 and 11 have been canceled. Applicants further respectfully submit that new claims 15 and 25 are neither taught

nor suggested by Dorval et al. alone or in combination with La Scola et al.

Specifically, Applicants respectfully submit that Dorval et al. do not teach or suggest the present invention as recited in the pending claims as discussed above.

Applicants also respectfully submit that the Dorval et al. document does not teach or suggest using the whole Staphylococcus aureaus bacteria as an antigen control as recited in the pending claims.

Applicants respectfully submit that according to the present invention, using the whole *Staphylococcus aureus* bacteria is advantageous because: (1) it is a corpuscular antigen control which is easier and reliable to adsorb onto a solid substrate when deposited thereon; and (2) the detection by visualization of a fluorescent marking of a corpuscular control agent is much more reliable and easier to detect than the visualization of an immunological reaction between an immunoglobulin and a purified protein adsorbed on a solid substrate.

For all of the above differences and advantages of the claimed present invention, it is submitted that it would not have been obvious for one of ordinary skill in the art at the time of the invention to modify the method taught by DORVAL et al. to arrive at the claimed invention in order to provide an easy control test of the presence of a human serum in the sample tested in the serological diagnosis method.

As for the La Scola et al. document, this document cannot be used to cure the deficiencies of the Dorval et al. document.

Applicants respectfully submit that La Scola et al. neither teach nor suggest a method or kit for detecting the presence of antibodies specific to an infectious microbial agent in a sample to be tested. Further, the La Scola et al. document

neither teaches nor suggests a method comprising a) depositing on a solid substrate a first antigen Ag_1 comprising a whole Staphylococcus aureus bacterium which comprises protein A and at least one second antigen Ag_2, wherein said second antigen Ag_2 is an infectious microbial agent, and b) contacting said first antigen Ag_1 and said at least one second antigen Ag_2 with a sample to be tested causing said first antigen Ag_1 and said at least one second Ag_2 to react with a sample to be tested, and c) detecting whether a human immunoglobulin Ac_1 in said human serum reacts with said first antigen Ag_1 by causing the reaction product Ag_1-Ac_1 to react with a detection substance, wherein said detection substance reacts with said human immunoglobulin and not with said first antigen (Ag_1), and wherein the reaction product Ag_1-Ac_1 is formed from the reaction of said human immunoglobulin Ac_1 and said first antigen Ag_1, and d) providing a controlled sample containing a human serum to be tested for detecting whether said human immunoglobulin react with said first antigen as recited in the claims of the present invention.

Therefore, one of ordinary skill in the art would not be motivated to combine the teaching of Dorval et al. with the teaching of La Scola et al. to make the present invention.

In view of the above, Applicants respectfully request reconsideration and withdrawal of this rejection.

CONCLUSION

In light of the foregoing Remarks, Applicants respectfully submit that the application is now in condition for examination.

Should any minor matter remain, or should the Examiner feel that an interview would expedite the prosecution of this application, the Examiner is invited to call the

undersigned to arrange such.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 935.44544X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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